TABLE OF CONTENTS VOLUME 14, 1966

No. 1, January 1966

Kevin D. Barron, Joseph Bernsohn and Adeline R. Hess. Esterases and Proteins of Normal and Atrophic Feline Muscle 1

Frank H. Ruddle. Kidney Esterases of the Mouse (*Mus musculus*): Electrophoretic Analysis of Inbred Lines C57BL/6J, RF/J and SJL/J 25

Adam A. M. Lewis and Robert L. Hunter. The Effect of Fat Ingestion on the Esterase Isozymes of Intestine, Intestinal Lymph, and Serum 33

U. Glas and G. F. Bahr. A Simple Method for the Determination of Water Content and Protein Concentration in Subcellular Elements 40

Gösta Gahrton. Normal Human Neutrophil Leukocytes As a Reference System for the Microspectrophotometrically Quantitated Periodic Acid-Schiff Reaction 45

Sven E. Brolin, Arne Ohlsson and Erik Borglund. An Approach to the Quantitative Histochemistry of the A-Cells in the Pancreatic Islets 49

K. Felgenhauer and G. G. Glenner. Quantitation of Tissue-Bound Renal Aminopeptidase by a Microdensitometric Technique 53

Albert Moraczewski and Rae C. Anderson. The Determination by Quantitative Histochemistry of the Effect of Phenothiazines on Brain Cytochrome *c* Oxidase Activity 64

Károly Balogh, Jr. Histochemical Demonstration of 3α-Hydroxysteroid Dehydrogenase Activity 77

Takenori Hashimoto and M. S. Burstone. Distribution Patterns of Oxidative Enzymes in Experimentally Induced Tumors, Regeneration and Inflammation of Mouse Skin 84

B. Mundkur and B. Brauer. Selective Localization of Nucleolar Protein with Amido Black 10B 94

R. Ortman, W. F. Forbes and A. Balasubramanian. Concerning the Staining Properties of Aldehyde Basic Fuchsin 104

Letters to the Editor

Herbert Braunstein and Richard J. Stenger. Hyaline Bodies in Carbon Tetrachloride-Damaged Hepatic Cells: Nucleosidediphosphatase Activity 112

Carlo Ravetto, Fernando Galluzzo and Raffaele Siervo. On the Presence of Sialic Acid and Sulfate Groups in Rat Submaxillary Gland 114

Allen W. Wachtel and Joan Lesser Japha. The Synthesis of Fluoresceinated Curarizing Reagents 115

Book Reviews 117

Announcements 119

No. 2, February 1966

Holde Puchtler and Faye Sweat. A Review of Early Concepts of Amyloid in Context with Contemporary Chemical Literature from 1839 to 1859 123

J. C. H. De Man and A. P. R. Blok. Relationship between Glycogen and Agranular Endoplasmic Reticulum in Rat Hepatic Cells 135

Frederick T. Zugibe and Marilyn L. Fink. A New Ion Association Technique for Demonstrating Polyanions in Tissue Sections 147

Frederick T. Zugibe and Marilyn L. Fink. A New Ion Association-Fractionation Technique for Identifying Individual Mucopolysaccharides and Other Polyanions in Tissue Sections 153

A. Rees Midgley, Jr. Human Pituitary Luteinizing Hormone: An Immunohistochemical Study 159

Robert S. Briggs, Pasquale E. Perillie and Stuart C. Finch. Lysozyme in Bone Marrow and Peripheral Blood Cells 167

G. W. Evans, Cecilia L. Whinney and K. C. Tsou. A New Histochemical Method for Acid Phosphatase by the Use of 5-Iodoindoxyl Phosphate 171

MAURICE M. BLACK AND HUDSON R. ANSLEY. Histone Specificity Revealed by Ammoniacal Silver Staining 177
C. D. MARSDEN. Oxidative Enzymes Responsible for the Conversion of 3,4-Dihydroxyphenylalanine to Melanin in the Small Intestine of Rodents 182
FREDERICK H. KASTEN AND A. E. CHURCHILL. Cytochemistry of Cytoplasmic and Intranuclear Inclusions Induced by Bovine Parainfluenza 3 Virus (SF-4) in Human Cell Cultures 187
HELEN ROLAND JERVIS AND EUGENE H. LABREC. Correlation of Acid Phosphatase Activity with Degree of Bacterial Infection in HeLa Cells 196
Letter to the Editor
PETER MAO AND KOMEI NAKAO. Variation of Localization of AMPase and ATPase Activities at the Plasma Membrane of Human Prostatic Epithelial Cells: An Electron Microscopic Study 203
Book Reviews 205
Histochemical Titles from Current Literature 206

No. 3, March 1966

A. L. JONES AND D. W. FAWCETT. Hypertrophy of the Agranular Endoplasmic Reticulum in Hamster Liver Induced by Phenobarbital (With a Review on the Functions of This Organelle in Liver) 215
SYDNEY S. LAZARUS, BRUNO W. VOLK AND HERBERT BARDEN. Localization of Acid Phosphatase Activity and Secretion Mechanism in Rabbit Pancreatic B-Cells 233
HSIEN-GIEH SIE, DEBORAH SAWYER AND WILLIAM H. FISHMAN. Enzymorphologic Demonstration of Glucose 6-Phosphate-Dependent Glycogen Synthetase in Mouse Liver 247
ROGER DAOUST. Modified Procedure for the Histochemical Localization of Ribonuclease Activity by the Substrate Film Method 254
H. P. MANSBERG AND J. KUSNETZ. Quantitative Fluorescence Microscopy: Fluorescent Antibody Automatic Scanning Techniques 260
WALTER E. STUMPF AND LLOYD J. ROTH. High Resolution Autoradiography with Dry Mounted, Freeze-Dried Frozen Sections. Comparative Study of Six Methods Using Two Diffusible Compounds ^{3}H-Estradiol and ^{3}H-Mesobilirubinogen 274

No. 4, April 1966

RICHARD C. GRAHAM, JR., AND MORRIS J. KARNOVSKY. The Early Stages of Absorption of Injected Horseradish Peroxidase in the Proximal Tubules of Mouse Kidney: Ultrastructural Cytochemistry by a New Technique 291
KENJIRO YASUDA AND ALBERT H. COONS. Localization by Immunofluorescence of Amylase, Trypsinogen and Chymotrypsinogen in the Acinar Cells of the Pig Pancreas 303
T. VANHA-PERTULLA, V. K. HOPSU AND G. G. GLENNER. Enzymes in Hog Kidney Hydrolyzing Amino Acid Naphthylamides 314
MURIEL LAZARUS SACKLER. Xanthine Oxidase from Liver and Duodenum of the Rat: Histochemical Localization and Electrophoretic Heterogeneity 326
J. CARNEIRO AND C. P. LEBLOND. Suitability of Collagenase Treatment for the Radioautographic Identification of Newly Synthesized Collagen Labeled with ^{3}H-Glycine or ^{3}H-Proline 334
JACOB Y. TERNER. Phosphotungstic Acid-Hematoxylin. Reactivity *in Vitro* 345
STEVEN D. DOUGLAS, SAMUEL S. SPICER AND PETER H. BARTELS. Microspectrophotometric Analysis of Basic Protein Rich Sites Stained with Biebrich Scarlet 352
Letter to the Editor
JAN L. E. ERICSSON. On the Fine Structural Demonstration of Glucose 6-Phosphatase 361
Book Reviews 363
Books Received 364
Announcements 366

No. 5, May 1966

William W. Schlaepfer and Richard M. Torack. The Ultrastructural Localization of Cholinesterase Activity in the Sciatic Nerve of the Rat 369
Z. Darżynkiewicz, A. W. Rogers and E. A. Barnard. Quantitative Analysis of the Esterases in Rat Megakaryocytes by a Radio-Isotope Cytochemical Technique 379
C. W. M. Adams, Y. H. Abdulla, O. B. Bayliss and R. O. Weller. Histochemical Detection of Triglyceride Esters with Specific Lipases and a Calcium-Lead Sulfide Technique 385
David M. Maeir and Herman Zaiman. The Development of Lysosomes in Rat Skeletal Muscle in Trichinous Myositis 396
K. Felgenhauer and G. G. Glenner. The Enzymatic Hydrolysis of Amino Acid β-Naphthylamides. II. Partial Purification and Properties of a Particle-Bound Cobalt-Activated Rat Kidney Aminopeptidase 401
T. C. Appleton. Resolution in Soluble-Compound Autoradiographs 414
R. D. Lillie, R. W. Palmer and A. Gutiérrez. A Diazosulfanilic Acid Azure A Sequence for Tissue Protein 421
Lloyd Silverman and David Glick. Studies in Histochemistry. LXXXV. Histochemical Demonstration of Protein with Bromsulfalein 425
L. E. McCurdy and M. S. Burstone. Water-Soluble Plastic Mounting Media 427
Letters to the Editor
J. Hugon and M. Borgers. A Direct Lead Method for the Electron Microscopic Visualization of Alkaline Phosphatase Activity 429
O. Behnke. Nonspecific Deposition of Lead in Experiments on Fine Structural Localization of Enzymatic Activity of Rat Blood Platelets 432
Väinö K. Hopsu and Eero O. Mäkinen. Two Methods for the Demonstration of Noradrenaline-Containing Adrenal Medullary Cells 434
Book Reviews 436
Announcements 439

No. 6, June 1966

George B. Koelle and Cornelia G. Gromadzki. Comparison of the Gold-Thiocholine and Gold-Thiolacetic Acid Methods for the Histochemical Localization of Acetylcholinesterase and Cholinesterases 443
Joseph Bernsohn, Kevin D. Barron, Paul F. Doolin, Adeline R. Hess and Marjorie T. Hedrick. Subcellular Localization of Rat Brain Esterases 455
George J. Siegel, Gerard M. Lehrer and Demetra Silides. The Kinetics of Cholinesterases Measured Fluorometrically 473
Mrityunjoy Mukherji, Anjan Kumar Ray and Parimal Bikas Sen. Histochemical Identification of Noradrenaline in Fluorescence Microscopy by Borohydride-Periodic Acid Sequence 479
Motohatsu Fujiwara, Chikako Tanaka, Hiroshi Hikosaka and Tadao Okegawa. Cytological Localization of Noradrenaline, Monamine Oxidase and Acetylcholinesterase in Salivary Glands of Dog 483
C. K. Williamson and S. C. Elliott. Renal Localization of Tritiated Streptococcal Polypeptide 491
Manning Michael Thaler and John M. Kissane. Quantitative Distribution of Lactic Dehydrogenase in the Regenerating Liver Lobule of the Rat 495
Samuel H. Hori. Effect of EDTA on Histochemical Demonstration of Phosphorylase Activity 501
Book Reviews 509
Histochemical Titles from Current Literature 510

No. 7, July 1966

Bertil Diamant and O. H. Lowry. Dry Weight Determination of Single Lyophilized Mast Cells of the Rat 519

LENNART JUHLIN AND WALTER B. SHELLEY. Detection of Histamine by a New Fluorescent *o*-Phthalaldehyde Stain 525
R. D. LILLIE. Histochemical Acylation of Aldehydes Produced by Periodic Acid Oxidation 529
J. R. MCLEAN AND G. BURNSTOCK. Histochemical Localization of Catecholamines in the Urinary Bladder of the Toad (*Bufo marinus*) 538
ROSE MARY BOCEK AND CLARISSA H. BEATTY. Glycogen Synthetase and Phosphorylase in Red and White Muscle of Rat and Rhesus Monkey 549
BRUCE FRIEDMAN, DONALD S. STRACHAN AND MAYNARD M. DEWEY. Histochemical and Biochemical Analysis of the Nonspecific Esterases of the Small Intestine of the Rat 560
CHRISTOPHER BELL. Use of the Direct-coloring Thiocholine Technique for Demonstration of Intracellular Neuronal Cholinesterases 567
Book Reviews 571
Announcements 572

No. 8, AUGUST 1966

Editorial Comment
TIBOR BARKA. Nomenclature in Histochemistry 575
MASANDO HAYASHI AND DAVID G. FREIMAN. An Improved Method of Fixation for Formalin-Sensitive Enzymes with Special Reference to Myosin Adenosine Triphosphatase 577
T. ADESANYA IGE GRILLO. A Quantitative and Histochemical Study of Phosphorylase in the Placenta 582
C. H. BEATTY, G. M. BASINGER, C. C. DULLY AND R. M. BOCEK. Comparison of Red and White Voluntary Skeletal Muscles of Several Species of Primates 590
JEROME J. DECOSSE AND NANCY AIELLO. Feulgen Hydrolysis: Effect of Acid and Temperature 601
Letters to the Editor
KARL MEYER. Problems of Histochemical Identification of Carbohydrate-Rich Tissue Components 605
LUDWIG A. STERNBERGER AND EDWARD J. DONATI. Use of Labeled Antibodies in Electron Microscopy 606
V. M. SHDANOV, A. KULBERG AND N. AZADOVA. Comments on Sternberger and Donati's Letter 607
DAVID KVISTBERG, GORDON LESTER AND ARNOLD LAZAROW. Staining of Insulin with Aldehyde Fuchsin 609
Book Reviews 612
Announcements 614
Histochemical Titles from Current Literature 615

No. 9, SEPTEMBER 1966

NORBERTO A. SCHOR AND DAVID GLICK. Studies in Histochemistry. LXXXVI. Quantitative Histologic Distribution in the Rat Adrenal of Enzymes Oxidizing Pyridine Nucleotides and Effects of ACTH 621
J. HUGON AND M. BORGERS. Ultrastructural Localization of Alkaline Phosphatase Activity in the Absorbing Cells of the Duodenum of Mouse 629
SIDNEY GOLDFISCHER, HUMBERTO VILLAVERDE AND REGINA FORSCHIRM. The Demonstration of Acid Hydrolase, Thermostable Reduced Diphosphopyridine Nucleotide Tetrazolium Reductase and Peroxidase Activities in Human Lipofuscin Pigment Granules 641
V. K. HOPSU, R. SANTTI AND G. G. GLENNER. Characterization of Enzymes Hydrolyzing Acyl Naphthylamides. III. Role of Kynurenine Formamidase 653
JANET L. BUTA, JAMES L. CONKLIN AND MAYNARD M. DEWEY. Subfractions of Lactate Dehydrogenase of the Rat 658
I. NAGATSU, S. MASON, JR. AND G. G. GLENNER. Tissue Fixation by Diazonium Salts of a Particle-Bound Rat Kidney Aminopeptidase 663

67-370A A 30

RICHARD L. KLEIN. A Histochemical and Biochemical Study of Nuclear Adenosine Triphosphate Hydrolysis in Embryo Heart 669
Letters to the Editor
P. J. STOWARD, S. A. BARKER, P. W. KENT AND A. G. E. PEARSE. Some British Comments on the Histochemical Nomenclature of Mucosubstances 681
P. J. STOWARD. Some Comments on the Mechanism of the Schiff Reaction 681
P. VAN DUIJN AND M. J. HARDONK. Reply to Stoward's Letter 683
JAMES L. CONKLIN AND MAYNARD M. DEWEY. Heterogeneity of Nicotinamide Adenine Dinucleotide Diaphorase 684
FELIX A. DE LA IGLESIA, EDUARDO A. PORTA AND W. STANLEY HARTROFT. Histochemical Urate Oxidase Activity and Microbodies in Nonhuman Primate Liver 685
EMANUEL RUBIN. Autoradiographic Characterization of Sulfated Acid Mucopolysaccharides in Experimental Cirrhosis 688
OLAVI ERÄNKÖ AND LIISA RÄISÄNEN. Demonstration of Catecholamines in Adrenergic Nerve Fibers by Fixation in Aqueous Formaldehyde Solution and Fluorescence Microscopy 690
ENRICO SOLCIA, ROBERTO SAMPIETRO AND GABRIELE VASSALLO. Indole Reactions of Enterochromaffin Cells and Mast Cells 691
Book Reviews 693

No. 10, OCTOBER 1966

Citation Indexing 697
ALAN S. ROSENTHAL, HAROLD L. MOSES, DAVID L. BEAVER AND SHIRLEY S. SCHUFFMAN. Lead Ion and Phosphatase Histochemistry. I. Nonenzymatic Hydrolysis of Nucleoside Phosphates by Lead Ion 698
HAROLD L. MOSES, ALAN S. ROSENTHAL, DAVID L. BEAVER AND SHIRLEY S. SCHUFFMAN. Lead Ion and Phosphatase Histochemistry. II. Effect of Adenosine Triphosphatase Hydrolysis by Lead Ion on the Histochemical Localization of Adenosine Triphosphatase Activity 702
LUDWIG A. STERNBERGER, JACOB S. HANKER, EDWARD J. DONATI, JOHN P. PETRALI AND ARNOLD M. SELIGMAN. Method for Enhancement of Electron Microscopic Visualization of Embedded Antigen by Bridging Osmium to Uranium Antibody with Thiocarbohydrazide 711
HENRY F. HOFF AND JÜRG GRAF. An Electron Microscopy Study of Phosphatase Activity in the Endothelial Cells of Rabbit Aorta 719
ISURANOBU SHIRAHAMA AND ALAN S. COHEN. A Congo Red Staining Method for Epoxy-Embedded Amyloid 725
JANE BAXANDALL. Biological Application of Immunologic Techniques in Electron Microscopy 730
Letter to the Editor
STANLEY MEIZEL AND CLEMENT L. MARKERT. The Use of Monotetrazolium Salt for the Detection of Dehydrogenases on Starch Gels 772
International Symposium on Electron Microscopy and Cytochemistry 739
Book Reviews 772
Histochemical Titles from Current Literature 773
Citation Index 780
Announcement 783

No. 11, NOVEMBER 1966

Seventeenth Annual Meeting of the Histochemical Society
Minutes of the Business Meeting 787
In Memoriam: Marvin S. Burstone 1922–1966 788
Proceedings of the Histochemical Society 789
Symposium on Physical Methods in Quantitative Histo- and Cytochemistry 832
ARNOLD LAZAROW. Introduction 832
ANNA-MARY CARPENTER. Scanning Methods: Volume Quantitation of Tissues, Cells and Subcellular Components 834

HEWSON SWIFT. Microphotometry in Biologic Research 842
DAVID R. KVISTBERG. Infrared Spectrophotometry. Its Use in Characterizing Histochemical Reaction Mechanisms 853
DAVID GLICK. The Laser Microprobe. Its Use for Elemental Analysis in Histochemistry 862
Letter to the Editor
ALEX M. SAUNDERS AND ROBERT C. ROSAN. Histochemical Nomenclature of Carbohydrate-Rich Components 869
Book Reviews 870
Announcements 872
Citation Index 873

No. 12, DECEMBER 1966

Obituary. Professor Helen Wendler (Deane) Markham 884
SERGEI P. SOROKIN. A Morphologic and Cytochemical Study on the Great Alveolar Cell 881
A. COIMBRA. Evaluation of the Glycogenolytic Effect of α-Amylase Using Radioautography and Electron Microscopy 898
ATHOS OTTOLENGHI, JOHN P. PICKETT AND WILLIAM B. GREENE. Histochemical Demonstration of Phospholipase B (Lysolecithinase) Activity in Rat Tissues 907
ZBIGNIEW DARŻYNKIEWICZ, ANDREW W. ROGERS AND ERIC A. BARNARD. The Number of Acetylcholinesterase Molecules in the Rat Megakaryocyte 915
BEATRIX MARKUS KOPRIWA. A Semiautomatic Instrument for the Radioautographic Coating Technique 923

Letters to the Editor

PAUL K. NAKANE AND G. BARRY PIERCE, JR. Enzyme-labeled Antibodies: Preparation and Application for the Localization of Antigens 929
NICOLE POUX. Ultrastructural Localization of Arxyl Sulfatase Activity in Plant Meristematic Cells 932
WILLIAM GIBSON AND HAROLD FULLMER. Demonstration of 5′-Nucleotidase Activity in Decalcified Bones and Teeth 934
Book Reviews 936
Announcement 938
Histochemical Titles from Current Literature 939
Citation Index 943
Author Index, Volume 14 950
Subject Index, Volume 14 953